

RESPONSE UNDER 37 C.F.R. § 1.116
U. S. Application No. 10/822,791

REMARKS

Claims 1-11 are all the claims pending in the application.

In response to the Amendment filed February 3, 2005, the Examiner repeated the previous claim rejections. Thus, claims 1-11 are rejected under 35 U.S.C. § 102(e) as being anticipated by previously-cited Akamatsu et al. (US 2004/0025584).

In the response to arguments, the Examiner simply repeats his assertions as to the alleged disclosures of Akamatsu and refers to FIGS. 4 and 5 of Akamatsu. The Examiner has provided no comments directly responsive to the arguments presented in the Amendment filed February 3, 2005.

In the February 3 Amendment, Applicant argued that Akamatsu does not teach or suggest the feature of claim 1 of a selector for comparing the flow rate signal outputted from the flow rate detector and a filter signal outputted from the filter to select the signal having a higher voltage from the flow rate signal and the filter signal as a new flow rate signal. The Examiner asserts that FIGS. 4 and 5 and claims 17-18 on page 10 of Akamatsu disclose this feature of the claims. Applicant respectfully disagrees.

Claims 17 and 18 of the reference recite the following:

*17. A heating resistor type air flow rate measuring apparatus comprising:
a pair of air flow rate detecting parts for detecting heating currents
necessary to heat a forward and a backward flow heating resistor installed in an
air passage to the predetermined temperature, respectively, as a forward flow
detection signal and a backward flow detection signal,*

RESPONSE UNDER 37 C.F.R. § 1.116

U. S. Application No. 10/822,791

a signal comparing means for determining the direction of the air flow in the air passage by the comparison of large and small of the forward and the backward flow detection signals,

a signal selecting means for selecting one of the forward and the backward flow detection signals on the basis of the result of determination, and

a differential amplifying circuit for switching and inputting the forward and the backward flow detection signals, adding an alternating current component of the backward flow detection signal to the input forward flow detection signal, and switching and outputting either one of an output signal higher than a reference voltage in proportion to the added signal and an output signal lower than the reference voltage in proportion to the input backward flow detection signal;

wherein an air flow rate signal including a directional component of the air flow is output by using the output signal from the differential amplifying circuit.

18. A heating resistor type air flow rate measuring apparatus comprising:

a pair of air flow rate detecting parts for detecting heating currents necessary to heat a forward and a backward flow heating resistor installed in an air passage to the predetermined temperature, respectively, as a forward flow detection signal and a backward flow detection signal,

a signal comparing means for determining the direction of the air flow in the air passage by the comparison of large and small of the forward and the backward flow detection signals,

a signal selecting means for selecting one of the forward and the backward flow detection signals on the basis of the result of determination, and

a differential amplifying circuit for switching and inputting the forward and the backward flow detection signals, inverting the phase of an alternating current component of the forward flow detection signal and adding the resultant signal to the input backward flow detection signal, and switching and outputting either one of an output signal higher than a reference voltage in proportion to the forward flow detection signal and an output signal lower than the reference voltage in proportion to the added signal;

wherein an air flow rate signal including a directional component of the air flow is output by using the output signal from the differential amplifying circuit.

RESPONSE UNDER 37 C.F.R. § 1.116
U. S. Application No. 10/822,791

In claim 1 of the present application, the selector compares the flow rate signal outputted from the flow rate detector and a filter signal outputted from the filter. By contrast, Akamatsu discloses in claims 17 and 18 a signal comparing means for determining the direction of the air flow in the air passage by the comparison of large and small of the forward and the backward flow detection signals. As disclosed in Akamatsu, the forward and backward flow detection signals are detected signals output by detectors. There is no disclosure in the reference that either of these signals is filtered before the comparison. As illustrated below in FIG. 4, the forward flow heating resistor output signal V_f is compared to the backward flow heating resistor output signal V_r by the operational amplifier OP1. See paragraph [0061] of Akamatsu.

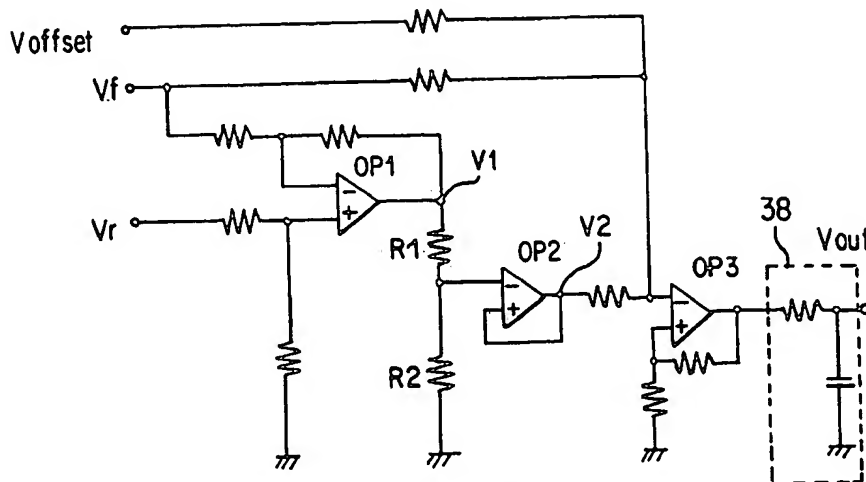


FIG. 4

Although FIG. 4 illustrates a filter 38, this filter is a filter used to eliminate noise in the output signal of the entire circuit of FIG. 4. In other words, the filter 38 does not provide a filter signal output for comparison with the flow rate signal outputted from the flow rate detector. The

RESPONSE UNDER 37 C.F.R. § 1.116
U. S. Application No. 10/822,791

comparison of Akamatsu's circuit is performed before the filtering. Thus, Akamatsu does not disclose or suggest a selector for comparing the flow rate signal outputted from the flow rate detector and a filter signal outputted from the filter to select the signal having a higher voltage from the flow rate signal and the filter signal as a new flow rate signal. Therefore, Applicant submits that claim 1 is not anticipated by Akamatsu.

Claims 2-4 and 11 are allowable due to their dependence from claim 1.

With further regard to claim 3, Applicant submits that Akamatsu does not teach or suggest that the filter is comprised of a high-pass filter, and the filter processing advances the flow rate signal with a predetermined time constant. In the Amendment filed February 3, 2005, Applicant argued that Akamatsu does not disclose this feature of claim 3, but the Examiner did not respond thereto. Instead, in the Response to Arguments, the Examiner asserts that FIGS. 4 and 5 of Akamatsu disclose a high pass filter. FIGS. 4 and 5 are described in Akamatsu's specification in paragraphs [0061] and [0062], respectively. Nothing in the description of these figures teaches or suggests the high pass filter of claim 3, and the Examiner has provided no contrary explanation. Therefore, claim 3 is not anticipated by Akamatsu for this reason also.

In response to the arguments for the allowability of claim 4 presented in the February 3 Amendment, the Examiner again fails to respond to the Applicant's arguments and simply refers to FIG. 5 in the Response to Arguments, without any explanation in support of his contention that FIG. 5 discloses the features of claim 4. Applicant submits that FIG. 5 and its corresponding description in Akamatsu's specification are silent with regard to the feature of claim 4 of the

RESPONSE UNDER 37 C.F.R. § 1.116
U. S. Application No. 10/822,791

filter processing executed by the filter being a processing for arithmetically operating a value lower than a mean value of the flow rate signal by a predetermined value to output the resultant value. Thus, claim 4 is allowable for this additional reason.

Applicant submits that claims 5-8 are not anticipated by Akamatsu, for reasons analogous to those for claims 1-4.

With regard to claim 9, Applicant argued in the February 3 Amendment that Akamatsu does not teach or suggest all of the limitations of the claim. The Examiner did not respond to these arguments at all. Thus, Applicant reiterates that claim 9 is not anticipated by Akamatsu for the reasons described in the Amendment filed February 3, 2005.

Applicant submits that claim 10 is allowable for reasons analogous to those for claim 9.

Finally, Applicant has the following comments on the Office Action. In the Response to Arguments, the Examiner states that during patent examination, the pending claims must be given the broadest reasonable interpretation consistent with the specification. Applicant respectfully requests the Examiner to provide an explanation of the Examiner's interpretation of the claims with respect to the applied prior art. The Applicant provided arguments against the Examiner's interpretation in the February 3, 2005 Amendment, but the Examiner's response to these arguments only generally referred to FIGS. 4 and 5, without providing any explanation of what portion of these figures or their corresponding description in Akamatsu's specification allegedly correspond to the features recited in the claims of the present application. Applicant

RESPONSE UNDER 37 C.F.R. § 1.116

U. S. Application No. 10/822,791

respectfully requests the Examiner to either provide a detailed explanation in response to the Applicant's arguments or remove the rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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